

U.S. Patent Appln. No. 09/697,465  
Response to Office Action mailed 3/13/2003

Docket No. 5785-23

### REMARKS

The amendments and remarks address the Office Action dated March 13, 2003. At the time of the Office Action, claims 21-50 were pending in this application. This amendment is timely filed.

In the Office Action, claims 21 and 25-37 were rejected. Claims 25-36 were rejected under 35 U.S.C. § 112, second paragraph. Claims 21 and 37 were rejected under 35 U.S.C. § 103(a). The rejections are set out in more detail below.

#### I. Fees

Prior to this amendment, claims 21-50 were pending, including four (4) independent claims and a total of thirty (30) claims. After this amendment, claims 21-55 (except for cancelled claim 36) are presented, including seven (7) independent claims and a total of thirty-four (34) claims. Thus, Applicant authorizes the Commissioner to charge Deposit Account No. 50-0951 for the three (3) additional independent claims and for four (4) additional total claims in excess of the number of claims already paid for in accordance with MPEP 608.01(n). The Commissioner is hereby authorized to charge \$162.00 to Deposit Account No. 50-0951 for these additional claims and is also authorized to charge any deficiencies and credit any overpayments to Deposit Account No. 50-0951.

#### II. Allowable Subject Matter

The Examiner noted that claims 40-50 have been allowed. Additionally, the Examiner noted that claims 22, 23, 24, 38, and 39 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Thus, claim 51 has been added, corresponding to claim 22, including all of the limitations of its base claim and any intervening claims. Similarly, claims 52, 53, 54, and 55, respectively corresponding to claims 23, 24, 38, and 39, have been added and include all the limitations of their respective base claim and any intervening claims. Allowance of claims 51-55 is respectively requested.

#### III. Rejections Under 35 U.S.C. § 112

In the Office Action, claims 25-36 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In support of these rejections, the Office Action asserts:

U.S. Patent Appln. No. 09/697,465  
Response to Office Action mailed 3/13/2003

Docket No. 5785-23

[t]hese claims are indefinite because selection of positioning the member "between said first and second fabric layer", as in claim 25 appears not to further limit claim 21 since this independent claim already requires a foam core between fabric layers and the load bearing member between portions of the foam core.

(Office Action, page 2)

Applicant asserts that claim 25 does further limit claim 21, and therefore, claims 25-36 are not indefinite. Claim 21 does not require positioning the rigid point compressive load bearing member in a location between the first and the second fabric layer as recited in claim 25. As clearly illustrated in Figure 3, the foam core can be positioned between the first and second fabric layers, while the rigid point compressive load bearing member can be positioned between portions of the foam core. Nevertheless, in Figure 3, the rigid point compressive load bearing member is not positioned between the first and second fabric layers. Withdrawal of the rejections regarding claims 25-35 is respectfully requested.

Claim 36 has been cancelled and the non-woven fabric layer of a continuous thermoplastic fiber which is needle punched to form a felt-like fabric has been included in claim 35.

#### IV. Review of Amended Claim 21 and Claim 37

Prior to addressing the rejections on art, a brief review of the features recited by claims 21 and 37 is appropriate. Claim 21 is directed to a method of forming high strength panels suitable for use in applications requiring a capability to withstand point compression loading without deformation. The method includes the steps of positioning a first fabric layer spaced from a second fabric layer to form opposing panel surfaces and fixing a foam core between at least a portion of the fabric layers to form the panel. The method also includes the step of selectively positioning at least one rigid point compressive load bearing member between portions of the foam core along areas of anticipated point compression loading in a location to prevent compression of the foam core when a point compressive load is applied to the point compressive load bearing members. The method also includes the step of selecting at least one of a structure and a material of the rigid point compressive load bearing member so that it has a greater resistance to compression as compared to a remaining portion of the panel exclusive of the rigid point compressive load bearing member.

U.S. Patent Appln. No. 09/697,465  
Response to Office Action mailed 3/13/2003

Docket No. 5785-23

Claim 37 is directed to a method of forming high strength panels suitable for use in applications requiring a capability to withstand point compression loading without deformation. The method recites the steps of positioning a first fabric layer spaced from a second fabric layer to form opposing panel surfaces and selectively positioning a rigid point compressive load bearing member between the first and second fabric layers along areas of anticipated point compression loading. The method also includes the step of injecting a foam core between at least a portion of the first and second fabric layers to form the panel, where the rigid point compressive load bearing member prevents compression of the foam core when a point compressive load is applied to the point compressive load bearing member.

V. Rejections under 35 U.S.C. §103(a)

Turning to the rejections on art, claims 21 and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,573,144 to Andersen. The Office Action alleges that:

Andersen discloses or suggests the basic claimed method of forming high strength panels including (1) positioning a first fabric layer spaced from a second fabric layer to form opposing panel surfaces (note the glass cloth face sheets disclosed at column 3, lines 65-70), (2) fixing a foam core between at least a portion of the fabric layers to form the panel, and (3) positioning or introducing at least one compressive load bearing member between portions of the foam core along areas of anticipated compression (the individual foam spacer blocks in Andersen are located between other foam blocks and are load bearing). Andersen appears not to explicitly state that the blocks prevent compression of the core but such would have been obvious to one of ordinary skill in the art in order to maintain spacing of strips 6, as set forth at column 4, line 59.

(Office Action, page 2-3)

First, the rejection of claim 21 will be addressed. In contrast to the assertions of the Office Action, Anderson discloses a structural element formed by interweaving resin-impregnated glass cloth webs among identical blocks of foam. Each block is identical to the other blocks having the same dimensions and uniform mechanical properties. Furthermore, the resin-impregnated glass cloth webs similarly have uniform mechanical properties. Each combination of a block and its associated cloth web will have the same mechanical properties, and therefore, do not provide a rigid point load bearing member. Anderson does

not disclose selecting at least one of a foam block (a structure) and a glass web cloth (a material) so that the combination has a greater resistance to compression as compared to a remaining portion of the structural element exclusive of the combination. Thus, Anderson does not teach or suggest the subject matter recited by claim 21.

Furthermore, Anderson does not teach or suggest the selectively positioning limitation, as recited in claim 21. Specifically, Anderson does not teach or suggest selectively positioning at least one rigid point compressive load bearing member between portions of the foam core along areas of anticipated point compression loading in a location to prevent compression of the foam core when a point compressive load is applied to the point compressive load bearing members. Because the blocks of Anderson have the same dimension and shape, each block is uniformly distributed in a pattern controlled by the dimension of the blocks. Therefore, the positioning of any member disclosed in Anderson is dictated by the dimension of the blocks and cannot be selectively positioned to correspond to areas of anticipated point compression loading. Thus, Anderson does not teach or suggest the subject matter recited by claim 21 and Applicant respectfully requests withdrawal of this rejection.

Turning to the rejection of claim 37, the Applicant asserts that Anderson does not teach or suggest the step of injecting a foam core between at least a portion of the first and second fabric layers to form the panel. Instead, Anderson discloses a structural element formed by interweaving resin-impregnated glass cloth webs among identical blocks of foam. The blocks of foam are formed before the process of interweaving can begin, and therefore, the proposed modification of injecting foam would alter the principle of operation of the process discussed in Anderson. The process of interweaving resin-impregnated glass cloth webs around anything requires a firm structure for the cloth webs to be interwoven around. Injected foam that has not hardened cannot provide such a firm structure. Additionally, injected foam that has hardened as one structural unit, that is substantially the size of the panel to be formed, would not permit the interweaving of cloth webs. Because interweaving web cloths around injected foam is not possible, Anderson cannot teach or suggest the subject matter of claim 37. Applicant respectfully requests withdrawal of this rejection.

#### VI. Conclusion

Applicant has made every effort to present claims which distinguish over the cited references, and it is believed that all claims are in condition for allowance. Therefore,

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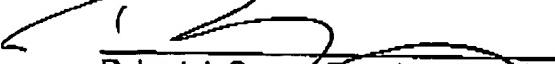
U.S. Patent Appn. No. 09/697,465  
Response to Office Action mailed 3/13/2003

Docket No. 5785-23

Applicant invites the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicant respectfully requests reconsideration and prompt allowance of the pending claims.

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Respectfully submitted,

  
Robert J. Sacco, Reg. No. 35,687  
AKERMAN SENTERFITT  
222 Lakeview Avenue, Suite 400  
P.O. Box 3188  
West Palm Beach, FL 33402-3188  
Tel: (561) 653-5000

Docket No. 5785-23